| 1 | WITH RANDOMLY ACTUATED STOPPING | 24 | With end-inserting or clamping means |
|-------|-----------------------------------|------------|--------------------------------------|
| • | OR DISABLING MEANS | 25 | Means to buckle flaccid work |
| 2 | WITH CONTROL MEANS RESPONSIVE TO | 26 | .With means to place member |
| 2 | SENSED CONDITION | 20 | between workpieces (e.g., |
| 3 | Responsive to work feed means | | dowels, etc.) |
| 4 | Responsive to position of work | 27 | .With drilling or punching means |
| _ | support or anvil | 28 | .With means to sequentially |
| 5 | .Work-responsive | 20 | secure layers (e.g., heels, |
| 6 | Position of work | | etc.) |
| 7 | Control initiates driver- | 29 | With work clamp |
| | actuation | 30 | .With driver acting through clamp |
| 175.1 | SURGICAL STAPLER | 30 | jaw |
| 175.2 | .With lockout | 31 | .Bight attaching means (e.g., |
| 175.3 | Responsive to a condition or | 31 | buttons, etc.) |
| | position of a staple magazine | 32 | Including means to insert |
| 175.4 | Lockout prevents firing of a | 32 | member in bight |
| | spent staple magazine | 33 | With member-forming means |
| 176.1 | .With magazine | 34 | After member is applied to a |
| 177.1 | Including biasing means | 34 | workpiece |
| 178.1 | Multiple driving means | 35 | Single pointed member |
| 179.1 | Tubular driving path | 36 | With work feed means |
| 180.1 | With cutting means | 37 | With work feed means |
| 181.1 | .With means to position a mating- | 38 | With means to actuate driver |
| | member in alignment with | 30 39 | |
| | driver | | .Work conveyer means |
| 182.1 | .With means to prevent partial | 40 | Including common means to shift |
| | drive cycle | 11 | and clamp work |
| 8 | WITH INTERLOCK MEANS | 41 | Pivoted work carrier |
| 9 | EXPLOSIVE-TYPE DRIVING MEANS | 42 | Plural pivotal axes |
| 10 | .With plunger | 43 | Including means to align |
| 11 | .With protective shield | 4.4 | member-aperture with member |
| 12 | STRETCHING TOOL WITH MEANS TO | 44 | Endless conveyer |
| | FASTEN FLACCID WORK TO RIGID | 45 | Including magazine-type work |
| | BASE | 1.0 | supply means |
| 13 | .Including mechanical means to | 46 | With reel-type work supply |
| | apply force to stretching tool | 4.57 | means |
| 14 | WITH MEANS TO CEMENT WORK OR | 47 | Including work cutting means |
| | MEMBER | 48 | Including magazine-type work |
| 15 | WITH MEANS TO POSITION "MATING- | 4.0 | supply means |
| | MEMBER" IN ALIGNMENT WITH | 49 | With means to rotate work |
| | DRIVER | 50 | With means to move assemblage |
| 16 | .Strip-type "mating-member" | Г1 | to fastener station |
| 17 | .With means to form "mating- | 51 | WITH MEANS TO HEAD MEMBER |
| | member" | 52 | .Driver or heading means located |
| 18 | .Comprising feed means for | F 2 | within tubular work |
| | "mating-member" | 53 | .Common tool to drive and head |
| 19 | WITH MEANS TO ASSEMBLE PLURAL | Γ 4 | member |
| | PIECES OF WORK | 54 | .Pointed or edged tool |
| 20 | .With means to deform work | 55 | .Heading tool extends within |
| 21 | Including cutting means | F.C | hollow portion of member |
| 22 | Including means to rotate work | 56 | Simultaneously used heading |
| 23 | With die-shaping means | - 7 | tools |
| | | 57 | With work feed means |

| 58 | With means to form opening in | 90 | Pivoted |
|--|---|---|---|
| | work for member | 91 | Including diverse means to |
| 59 | Heading means also acting as | | sever and apply member |
| | opening former | 92 | .With opposed tools to form |
| 60 | With pilot pin | | member (e.g., forging, |
| 61 | .Anvil | | swaging, etc.) |
| 62 | Die | 93 | .Severing means sole member |
| 63 | WITH MEANS TO WITHDRAW MEMBER | | former |
| 64 | WITH MEANS TO SHAPE WORK OR CUT | 94 | Including plural diverse |
| | PRODUCT | 2 = | severing operations |
| 65 | .Buckling of flaccid work | 95 | With feed means for |
| 66 | .Deforming means with rectilinear | 0.6 | concatenated members |
| | reciprocating motion | 96 | Pivoted feed means |
| 67 | .Means to form opening in work for member | 97 | Severing means moves member to driver |
| 68 | Driver also acting as punch | 98 | With reciprocating member |
| 69 | Rotatable cutting tool | | carrier to driver |
| 70 | Plural cutting tools (e.g., | 99 | WITH MEANS TO CONVEY WORK OR |
| | awls, etc.) | | PRODUCT RELATIVE TO DRIVING |
| 71 | For dual openings | | STATION |
| 72 | With pivoted tool carrier | 100 | .Interrelated conveying and |
| 73 | Including work-feeding means | | driver-actuating means |
| 74 | Cutting tool having work- | 101 | With means to move both the |
| | feeding motion | | conveyer and a driver carriage |
| 75 | With pivoted tool carrier | 102 | With means to vary timed |
| 76 | .Cutting means | | relationship between conveyer |
| | | | |
| 77 | WITH MEANS TO DEFORM MEMBER | | movement and driver actuating |
| 77 | WITH MEANS TO DEFORM MEMBER REMOTE FROM THE WORK SURFACE | 102 | means |
| | | 103 | meansPlural conveying means |
| 77 | REMOTE FROM THE WORK SURFACE | 104 | <pre>meansPlural conveying meansWith compound movement of work holder</pre> |
| | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER | | <pre>meansPlural conveying meansWith compound movement of work</pre> |
| 78 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS | 104 | <pre>meansPlural conveying meansWith compound movement of work holderWith rotary movement of work</pre> |
| 78 79 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite | 104 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder |
| 78 79 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION | 104 105 106 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holderWork holder moves in curved path |
| 78 79 80 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length | 104 105 106 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holderWork holder moves in curved path WITH MEANS TO MOVE OR GUIDE |
| 78 79 80 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS | 104 105 106 107 108 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools |
| 78 79 80 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF | 104 105 106 107 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different |
| 78 79 80 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING | 104 105 106 107 108 109 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members |
| 78 79 80 81 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) | 104 105 106 107 108 109 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driver |
| 78 79 80 81 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR | 104 105 106 107 108 109 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver |
| 78 79 80 81 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK | 104 105 106 107 108 109 110 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver carriage |
| 78 79 80 81 82 83 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK .Deflector | 104 105 106 107 108 109 110 111 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver carriage .Fluid-contact member-feed means |
| 78 79 80 81 82 83 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK .Deflector .With means to vary length of | 104 105 106 107 108 109 110 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver carriage .Fluid-contact member-feed means .Magnetic member-feed and/or |
| 78 79 80 81 82 83 84 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK Deflector With means to vary length of members With offset tools to deform members (e.g., bending, | 104 105 106 107 108 109 110 111 112 113 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver carriage .Fluid-contact member-feed means .Magnetic member-feed and/or holding means |
| 78 79 80 81 82 83 84 85 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK .Deflector .With means to vary length of members .With offset tools to deform members (e.g., bending, drawing, etc.) | 104 105 106 107 108 109 110 111 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver carriage .Fluid-contact member-feed means .Magnetic member-feed and/or holding means .Including means other than the |
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| 78 79 80 81 82 83 84 85 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK .Deflector .With means to vary length of members .With offset tools to deform members (e.g., bending, drawing, etc.) .With cutting edge on driver .With driver acting through offset tools | 104 105 106 107 108 109 110 111 112 113 114 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holderWork holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver carriage .Fluid-contact member-feed means .Magnetic member-feed and/or holding means .Including means other than the driver to separate leading member from a supplyInterrelated separator elements |
| 78 79 80 81 82 83 84 85 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK .Deflector .With means to vary length of members .With offset tools to deform members (e.g., bending, drawing, etc.)With cutting edge on driverWith driver acting through offset toolsIncluding retractable forming | 104 105 106 107 108 109 110 111 112 113 114 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holder .Work holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver carriage .Fluid-contact member-feed means .Magnetic member-feed and/or holding means .Including means other than the driver to separate leading member from a supplyInterrelated separator elementsRectilinear motion |
| 78 79 80 81 82 83 84 85 | REMOTE FROM THE WORK SURFACE AFTER WORK PENETRATION SELECTIVE ALTERNATIVE APPLYING MEANS WITH MEANS TO CUT MEMBER AFTER PENETRATION .From material of indefinite length DRIVING MOTION OF DRIVER HAS COMPONENT IN DIRECTION OF MOVING WORK (I.E., FLYING DRIVER) WITH MEANS TO FORM MEMBER PRIOR TO PENETRATION OF WORK .Deflector .With means to vary length of members .With offset tools to deform members (e.g., bending, drawing, etc.) .With cutting edge on driver .With driver acting through offset tools | 104 105 106 107 108 109 110 111 112 113 114 | meansPlural conveying meansWith compound movement of work holderWith rotary movement of work holderWork holder moves in curved path WITH MEANS TO MOVE OR GUIDE MEMBER INTO DRIVING POSITION .With work-penetrating clenching tools .Adaptable to dispense different sizes or quantities of members .With positionable driverIncluding means to move driver carriage .Fluid-contact member-feed means .Magnetic member-feed and/or holding means .Including means other than the driver to separate leading member from a supplyInterrelated separator elements |

| 119 | .With means to assure correct orientation of member(s) | | |
|------|--|---------|---------------------------------|
| 120 | .Including supply magazine for constantly urged members | CROSS-R | EFERENCE ART COLLECTIONS |
| 121 | With means to prevent partial drive cycle | | - |
| 122 | With means to cut jammed member | 901 | SURGICAL CLIP APPLIERS |
| 123 | With removable or resiliently | 902 | SURGICAL CLIPS OR STAPLES |
| 143 | urged (antijam) noseplate | | |
| 124 | With interrelated driver and | | |
| 124 | work clamp | FOREIGN | ART COLLECTIONS |
| 125 | With means to disable urging means | FOR | CLASS-RELATED FOREIGN DOCUMENTS |
| 126 | By lock means | ron | CHADD-REHATED FOREIGN DOCUMENTS |
| 127 | With magazine closure | | |
| 128 | Pivoted magazine cover | | |
| 129 | With means to actuate driver | | |
| 130 | Fluid pressure means | | |
| 131 | Magnet or solenoid | | |
| 132 | Spring | | |
| 133 | Inertia means | | |
| 134 | Spring-retracting means | | |
| 135 | .Including carrier feed means for | | |
| | a plurality of members | | |
| 136 | With means to feed strip-type | | |
| | carrier | | |
| 137 | Rotary | | |
| 138 | .Driver actuates member-feed | | |
| | means | | |
| 139 | .With means to guide member | | |
| 140 | WITH MEANS TO SUPPORT MEMBER AND/ | | |
| | OR WORK RELATIVE TO DRIVER | | |
| 141 | .Driver moves work, member held stationary | | |
| 142 | .With means to vary the length of | | |
| 1.40 | the tool stroke | | |
| 143 | .With means to move elements of tool-pair during driving | | |
| 144 | Pivoted tool element | | |
| 145 | .Curved driver path | | |
| 146 | .Spring-actuated driver | | |
| 147 | .Impact-type driver | | |
| 148 | .Comprising means to angularly orient member | | |
| 149 | .Bias-type member holder | | |
| 150 | .Means to guide moving work | | |
| 151 | .Work immobilizer | | |
| 152 | Means to clamp work | | |
| 153 | Interrelated with driver- | | |
| | actuation | | |
| 154 | .Work support | | |
| 155 | Including clenching means | | |
| 156 | MISCELLANEOUS | | |